

COMMENTS ON ENTROPY SLICES

JCTVC-K0288



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- **Entropy slices specified in current HEVC text but are not included in the Main Profile definition**
 - Seems to be only feature with this status and was topic of discussion at USNB
 - Suggest that entropy slices be either added in the Main Profile or removed from the final standard for consistency

- **Entropy slices originally proposed in JCTVC-B111**
 - Designed to permit parallel CABAC decoding while still allowing cross-slice prediction during reconstruction.
 - Intended to enable parallelism without sacrificing coding efficiency as an alternative to using independent slices which have a coding loss as a result of the independent reconstruction processes

- **Current WD text and HM software**

- Entropy slices identical to dependent slices except that the CABAC context probability models are reset at the start of each entropy slice
- All other forms of cross-slice prediction are still permitted
- This includes using CTBs in neighboring slices for CABAC context determination and for intra mode prediction

- **Example: The coefficient scan order for 8x8 and 4x4 intra coded transform units is a function of the intra prediction mode**

- Coefficient scan order directly impacts the CABAC parsing process
- Intra modes must be determined during CABAC decoding
- Entropy slices do not break intra mode prediction dependencies
- Thus, entropy slices are not independently CABAC decodable

PROPOSED SOLUTION



- Entropy slices fail to satisfy the original intent of providing independent entropy decoding
- HEVC provides other options for parallel decoding
- Recommend removing entropy slices concept from HEVC specification



Thank you!